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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/729,275

12/05/2003

Tim Hellman

15817US02

1607

7590

10/27/2006

Christopher C. Winslade  
 McAndrews, Held & Malloy  
 Suite 3400  
 500 W. Madison Street  
 Chicago, IL 60661

EXAMINER

RAHMJOO, MANUCHER

ART UNIT

PAPER NUMBER

2628

DATE MAILED: 10/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/729,275

Applicant(s)

HELLMAN, TIM

Examiner

Mike Rahmjoo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

DETAILED ACTION

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim1- 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 1 and 9 applicant recites "...copying the plurality of ...for display". It is not made clear if any displaying is being performed.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2,4-5,7-10,12-13,and 15-16 rejected under 35 U.S.C. 103(a) as being unpatentable over LINZER et al, US Patent Application Publication, Pub., No. US 2004/0100577 in view of Hu et al (US Patent 6205181), hereinafter, Hu.

As per claims 1 and 9, as to the broadest reasonable interpretation by examiner, LINZER et al teaches retrieving a plurality of color space components from a first

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memory, wherein a decomposing of pixel image data produces said color space components and wherein each of color space components begins in a different burst see for example paragraphs [0037], [0042] , [0063] and [0073] for the decomposed three primary colors associated with different color space components which are transferred in different burst; and storing and retrieving (see for example paragraphs [0042] and [0051] for fetching, storing/ retrieving) the plurality of color space components in one continuous machine-readable memory segment in a machine readable memory (see section 0042 - ".Cb and co- located Cr pixels may be stored adjacent to each other"), the machine readable memory having one or more burst boundaries (section 0042 also discloses more than one burst boundary broadly corresponding to different memory segments); and storing the pixel image data in one continuous machine readable memory segment in the machine readable memory device, the continuous machine readable memory segment having one or more burst boundaries see for example paragraph [0033] for memory 102 (corresponding to one continuous memory) is implemented as one 32-bit wide chip wherein a burst may comprise 16 bytes aligned to a 16 byte boundary and paragraph [0054] for the each memory (right or left memories corresponding to continuous memory segment) switches between rows every burst length; LINZER et al inherently teaches copying the plurality of color space components to a video frame being decoded for display through motion compensation which is in accordance with applicant's definition as per applicant's specification see for example paragraph [0033].

However, LINZER et al does not teach each burst comprises color space components of a single type.

Hu teaches each burst comprises color space components of a single type see for example fig. 7 and column 7 lines 55- 60 for the uv reading in one burst access rather than two.

It would have been made obvious to one of ordinary skilled in the art at the time the invention was made to incorporate the teachings Hu into LINZER et al to have a burst comprising color space components of a single type and therefore increase the speed of movement of large sequential blocks of data substantially see col. 2 line 20 as well as having all color space components for one macroblock which may be fetched simultaneously through the use of one burst access, thus decreasing the required bandwidth see col. 4 lines 45- 50.

As per claims 2 and 10, LINZER et al meet limitations of claim 1, including, wherein the machine-readable memory comprises volatile memory (SDRAM is analogous to volatile memory - see sections 0006, 0008 and 0033).

As per claims 4 and 12, LINZER et al meet limitations of claim 2, including, wherein the volatile memory comprises static random memory ( see sections 0006, 0008 and 0033).

As per claims 5 and 13, LINZER et al meet limitations of claim 1, including, wherein the color space components comprise luminance, red difference sample, and blue difference sample see (section 0042)

As per claims 7 and 15, LINZER et al meet limitations of claim 1, including, wherein the pixel image data comprises a first data byte (section 0007), the first data byte being registered at a memory address immediately following one of the one or more burst boundaries (see section 0007 and section 0054 matches the address means with the burst means for the at least one burst boundary).

As per claims 8 and 16, of claim 1 wherein the pixel image data comprises a first data byte and subsequent data bytes (see section 0007), one of the subsequent data bytes being registered at a memory address immediately following one of the one or more burst boundaries (see section 0007 and section 0054 matches the address means with the burst means for the at least one burst boundary).

Claims 3, 6, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over LINZER et al in view of Hu and further in view of BALKRISHNAN et al, US Patent No. 6,028,612, hereinafter, BALKRISHNAN.

As per claims 3 and 11, the modified LINZER et al meet limitations of claim 2, however, does not expressly teach use of dynamic random access memory (DRAM).

BALAKRISHNAN teaches the above feature (col 8, lines 3-23).

It would have been obvious to one skilled in the art at the time of the invention to use the DRAM processing means because "...the delay of the burst is fixed --(see col 8, lines 15-23)" and provides results in "minimizing the memory bandwidth consumed by the overall decoding process - see col 8, lines 21-23) of BALAKRISHNAN et al to modify the memory for video storing data taught by the modified LINZER et al because both inventions share similar technological environments and share similar problems,

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i.e., better utilization of bandwidth, and modification with the teaching of BALAKRISHNAN et al reduces bandwidth requirements.

As per claims 6 and 14, the modified LINZER et al meet limitations of claims 1 and 9, LINZER et al teach wherein the color space components comprise a red color level, and a blue color level (see section 0042), however, does not expressly teach a green color level.

BALAKRISHNAN et al teach the above feature (see col 10, lines 5-14 and col 11, lines 7- 16).

It would have been obvious to one skilled in the art at the time of the invention to use the features for "minimizing the memory bandwidth consumed by the overall decoding process - see col 8, lines 21-23)" of BALAKRISHNAN et al to modify the memory for video storing data taught by the modified LINZER et al because both inventions share similar technological environments and share similar problems, i.e., better utilization of bandwidth, and modification with the teaching of BALAKRISHNAN et al reduces bandwidth requirements.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1- 16 have been considered but are moot in view of the new ground(s) of rejection.

### **Inquiry**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Rahmjoo whose telephone number is 571-272- 7789. The examiner can normally be reached on 8 AM- 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on 571-272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Rahmjoo

October 19, 2006



KEE M. TUNG  
SUPERVISORY PATENT EXAMINER